

ABSTRACT OF THE DISCLOSURE**SUPERCRITICAL POLYMERIZATION PROCESS AND POLYMERS
PRODUCED THEREFROM**

This invention relates to a process to produce propylene polymers comprising contacting a metallocene catalyst compound and an activator in a reaction medium comprising propylene, from 0 to 30 volume % of one or more solvents and from 0 to 30 mole % of one or more comonomers, under temperature and pressure conditions below the melting point of the propylene polymer and where:

- a) the temperature is at or above the critical temperature for the reaction medium, and the pressure is at least 500 kPa above the critical pressure of the reaction medium; or
- b) the temperature is 1 °C or more above the critical temperature for the reaction medium, and the pressure is at or above the critical pressure of the reaction medium; or
- c) the temperature is 1 °C or more above the critical temperature for the reaction medium, and the pressure is at least 500 kPa above the critical pressure of the reaction medium.